

Holotype (BMNH)

Material: 1 ♂, Xiangkhouang

Distribution: Thailand

2000-2008, 19°39'N, 102°58'E

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The Lasiocampidae (Lepidoptera) of Laos. Part 2

by

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Abstract: As a result of a recent expedition undertaken in October-November 2008 in Central Laos by Yu. BEZVERKHOV and V. SINYAEV (both from Moscow) 19 species of the Lasiocampidae, new for Laos, were discovered. Thus, the specific composition of the Lasiocampidae in Laos now rises to 71 species. *Kunugia loelagrig spec. nov.* from Saysomboune Province, Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, is described as new.

Zusammenfassung: Auf einer Expedition von Yu. BEZVERKHOV & V. SINYAEV (beide aus Moskau), die im Oktober und November 2008 erfolgte, konnten 19 Lasiocampidae-Arten als neu für Laos nachgewiesen werden. Somit umfaßt der Lasiocampidenbestand in Laos nunmehr 71 Arten. *Kunugia loelagrig spec. nov.* wird aus dem Phou Khao Khouay Naturschutzpark, Saysomboune Provinz, 18°54'N, 103°08'E, beschrieben.

52 species of the Lasiocampidae were listed from Laos by ZOLOTUHIN & IHLE (2008). During a further expedition, undertaken in October-November 2008 in Central Laos by Yu. BEZVERKHOV and V. SINYAEV, 19 more species, new for the country, could be discovered. Thus, the specific composition of Lasiocampidae in Laos now consists of 71 species. The species list is given below.

As in the previous work, species marked with an asterisk (*) are recorded from Laos for the first time. All specimens listed below are kept in the collection of YURY A. BEZVERKHOV, Moscow, Russia, but the holotype of the new species will be transferred to the entomological Museum WITT (Munich, Germany).

Itinerary and locations of the expedition:

21.X.2008, Saysomboune Prov., Thongkhoun, 18°58'N, 102°00'E, 700 m, a night in a hotel on the road to Phou Bia;

22.-24.X.2008, Saysomboune Prov., Muang Cha, 18°54'N, 103°08'E, 1300 m;

25.-29.X.2008, Saysomboune Prov., Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, 750 m;

30.X.2008, Saysomboune Prov., Nam Pha Noi, 19°00'N, 102°58'E, 1100 m, a night in a military division;

1.XI.2008, Xiangkhouang, Phonsavan, 19°28'N, 103°10'E, 1050 m;

2.XI.2008, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 750 m;

3.-4.XI.2008, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 1300 m;

5.XI.2008, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 750 m;

6.XI.2008, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 1100 m;

5.XI.2008, Xiangkhouang Prov., Ban Na Sao, 19°39'N, 102°58'E, 1500 m.

The following abbreviations are used for the museums in the text:

BMNH: The Natural History Museum, London.

CMSW: Collection of MANFRED STRÖHLE, Weiden, Germany.

MWM: Entomological Museum WITT, München, Germany.

NHML: Natural History Museum, Leiden, the Netherlands.

ZFMK: Zoologisches Forschungsinstitut und Museum ALEXANDER KOENIG, Bonn, Germany.

ZSM: Zoologische Staatssammlung, München, Germany.

All material was collected by Yu. BEZVERKHOV & V. SINYAEV, therefore the collectors' family names are excluded in the text.

A distributional check-list of the species

**Euthrix fossa* (SWINHOE, 1879)

Odonestis fossa SWINHOE, 1879, Ann. Mag. Nat. Hist. 19: 410. Type locality: India, Jaintia Hills. Holotype ♂ (BMNH).

Euthrix fossa mariae ZOLOTUHIN, 2001

Atalanta 32: 456, fig. 3, pl. 12: 5, 6. Type locality: Thailand, Chiang Mai, Doi Phahompok, 16 km NW of Fang, 2050 m. Holotype ♂ (MWM).

Material: 1 ♀, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 5.XI.2008, 750 m.

Distribution: India (Jaintia Hills), Bhutan (ssp. *fossa* SWINHOE); northern Thailand and Laos (ssp. *mariae* ZOLOTUHIN).

**Euthrix improvisa* (DE LAJONQUIÈRE, 1978)

Philudoria improvisa DE LAJONQUIÈRE, 1978, Ann. Soc. ent. France 14 (3): 390, pl. 1 G: 7. Type locality: [northern Vietnam] Cochinchina, Tuyen Quang [Prov.]. Holotype ♂ (BMNH).

Material: 1 ♂, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 5.XI.2008, 750 m.

Distribution: Southern China, northern Thailand, northern Vietnam, Laos.

**Euthrix sherpai* ZOLOTUHIN, 2001

Atalanta 32: 456, fig. 2, pl. XII: 3, 4. Type locality: Thailand, Chiang Mai, 6 km SE of Pang Faen, 1100 m. Holotype ♂ (MWM).

Material: 3 ♂♂, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 5.XI.2008, 750 m; 1 ♂, Saysomboune Prov., Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, 25.-29.X.2008, 750 m; 1 ♂, Xiangkhouang prov., Ban Na Sao, 19°39'N, 102°58'E, 5.11.2008, 1500 m.

Distribution: Southern China (Yunnan), Thailand, central Vietnam.

Euthrix lao ZOLOTUHIN, 2001

Atalanta 32: 459, fig. 4, pl. XII: 7. Type locality: Laos, Luang Prabang. Holotype ♂ (CMSW).

Material: 2 ♂♂, Saysomboune Prov., Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, 25.-29.X.2008, 750 m; 1 ♂, Saysomboune Prov., Nam Pha Noi, 19°00'N, 102°58'E, 30.X.2008, 1100 m.

Distribution: The species is known only from Laos so far; the smallest species of the *imitatrix/improvisa* group. Previously it was known only after its type locality; here some more localities are given.

**Micropacha krocha* ZOLOTUHIN, 1995

Tinea 14: 161, figs 10, 20. Type locality: Northern Thailand, Nan Prov., Pua. Holotype ♂ (ZFMK).

Material: 1 ♂, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 5.XI.2008, 750 m; 1 ♂, Saysomboune Prov., Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, 25.-29.X.2008, 750 m; 6 ♂♂, Saysomboune Prov., Nam Pha Noi, 19°00'N, 102°58'E, 30.X.2008, 1100 m; 1 ♂, Saysomboune Prov., Thongkhoun, 18°58'N, 102°00'E, 21.X.2008, 700 m; 1 ♀, Xiangkhouang Prov., Ban Na Sao, 19°39'N, 102°58'E, 5.11.2008, 1500 m. Distribution: Thailand and Laos.

**Gastropacha acutifolia* ROEPKE, 1953

Tijdsk. Ent. 96: 95. Type locality: West Java, Perbawattee. Holotype ♂ (NHML).

Material: 1 ♂, Xiangkhouang Prov., Ban Na Sao, 19°39'N, 102°58'E, 5.11.2008, 1500 m; 1 ♂, Saysomboune Prov., Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, 25.-29.X.2008, 750 m. Distribution: Thailand (Nan, Chiang Mai), Laos, Sumatra, Borneo, Java.

**Gastropacha sikkima* MOORE, 1879

Descr. new Indian lep. Ins. Colln late Mr ATKINSON 1: 75. Type locality: India, Darjeeling. Lectotype ♂ (BMNH).

Material: 1 ♂, Xiangkhouang Prov., Ban Na Sao, 19°39'N, 102°58'E, 5.11.2008, 1500 m.

Distribution: India (Darjeeling, Sikkim), Thailand (Nan), Laos.

**Pachypasoides lucanivalvus* ZOLOTUHIN, 2002

Ent. Z. 112: 136, figs 2, 4. Type locality: Thailand, Chiang Mai, Doi Phahompok, 23 km NW of Fang, 1950 m. Holotype ♂ (MWM).

Material: 1 ♂, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 5.XI.2008, 750 m. Distribution: Thailand and Laos.

**Kunugia austroplacida* HOLLOWAY, 1987

Moths Borneo 3: 34, pl. 4: 31. Type locality: [Borneo] Sarawak, Gunong Mulu National Park, Mulu, 500 m, mixed dipterocarpus forest. Holotype ♂ (BMNH).

Material: 1 ♂, Saysomboune Prov., Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, 25.-29.X.2008, 750 m; 2 ♂♂, Saysomboune Prov., Thongkhoun, 18°58'N, 102°00'E, 21.X.2008, 700 m; 1 ♂, Xiangkhouang Prov., Ban Na Sao, 19°39'N, 102°58'E, 5.11.2008, 1500 m.

Distribution: Thailand, Laos, Vietnam, Peninsular Malaysia to Sumatra, Borneo, Java, Palawan.

**Kunugia loelagrig* spec. nov. (fig. 2)

Type material: Holotype ♂, Laos, Saysomboune Prov., Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, 25.-29.X.2008, 750 m, leg. Y. BEZVERKHOV & V. SINAYEV.

♂: Wingspan 55 mm. The hindwing with distinct reddish-violet tint in the central area. Wing pattern consists of 4 vague, oblique, straight parallel greyish fasciae, with a darker field between the two central ones. External fascia is weak, greyish to blackish, present as a row of small spots; tornal angle with distinct bluish suffusion. Hindwing is without pattern. In external characters the species is indistinguishable from most other congeners.

♂ genitalia (fig. 1): Longer and more slender than in other congeners. Tegumen narrow, vinculum cup-shaped. Valvae pyramid-like, with the apex protruded on the top and with a distinct tooth on the inner rib. Distal vinculum processes flattened, with awl-like caudal appendages and two small straddling lumps in sub-basal zone. Aedeagus is short, with wide tubular base, distinct curved apical spur and long sclerotized tube at the base of the vesica. Vesica long tubular, with a single twisted needle-shaped cornutus in basal third by the top of the sclerotized tube; this cornutus is diagnostically directed craniad. Sternum 8 not protruded.

Diagnosis: Impossible to separate by external characters from related species (*quadrilineata* HOLLOWAY, 1987; *grjukovae* ZOLOTUHIN, 2005, and some so far undescribed species from southern Myanmar and Cambodia) but can be easily separated by genitalic structure where shape of sub-basal straddling lumps on the distal processes of vinculum, shape of valva and characteristic sub-basal twisted craniad cornutus are diagnostic. The only member of this group is known from Laos so far.

Bionomics: Rather rare species. The only known specimen was collected in late October at an altitude of 750 m. The ♀, preimaginal stages and host plants are unknown.



Fig. 1, 2: *Kunugia loelagrig* spec. nov. (1) genitalia of the holotype ♂, aedeagus extracted (cornutus marked) and sternum 8, (2) holotype ♂. (for fig. 2 in colour, see p. 35.)



Distribution: The species is known so far from Laos only.

Etymology: This species is dedicated to HELENE GRIGORIEVA the mother-in-law of YURY A. BEZVERKHOV, the collector of the species. She was called 'grandma Loelya' by the family, with love and respect.

**Metanastria gemella* DE LAJONQUIÈRE, 1979

Ann. Soc. ent. France 15 (4): 686, pl. 1 D, E: 4-7. Type locality: North Sumatra, str. Siantar - Prapat, 1150 m. Holotype ♂ (ZSM).

Material: 1 ♂, 1 ♀, Saysomboune Prov., Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, 25.-29.X.2008, 750 m.

Distribution: India, Nepal, southern and south-eastern China, Vietnam, Thailand, Malaysia, Sumatra, Borneo.

**Syrastrena borneensis* TAMS, 1935

Syrastrena minor borneensis TAMS, 1935, Mem. Mus. Roy. Hist. Nat. Belg. 4 (12): 47, figs 4, 8. Type locality: [Borneo] Sarawak, Bidi. Holotype ♂ (BMNH).

Material: 1 ♂, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 5.XI.2008, 750 m.

Distribution: Thailand, Laos, Vietnam, Peninsular Malaysia, Sumatra, Borneo.

**Radhica puana* ZOLOTUHIN, 1995

Radhica flavovittata puana ZOLOTUHIN, 1995, Tinea 14 (3): 168, figs 12, 24 (a, b). Type locality: Northern Thailand, Nan Prov., Pua, Doi Phu Kha, km 35, 1680 m. Holotype ♂ (ZFMK).

Material: 1 ♂, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 5.XI.2008, 750 m; 1 ♂, Xiangkhouang prov., Ban Na Sao, 19°39'N, 102°58'E, 5.11.2008, 1500 m. Distribution: Southern China, Myanmar, northern Thailand, Vietnam, Peninsular Malaysia.

**Arguda insulindiana* DE LAJONQUIÈRE, 1977

Bull. Soc. ent. France 82: 182, pl. 1 F, G: 13. Type locality: North-eastern Sumatra, Dalok Merangir, 180 m. Holotype ♂ (ZSM).

Arguda insulindiana inexpectata ZOLOTUHIN & WITT, 2000

Entomofauna Suppl. 11: 95, fig. 25; pl. 13: 74. Type locality: Vietnam sept., Plato TayNguyen, Mt. NgocLinh, 900-1400 m., 15°02'N, 107°59'E. Holotype ♂ (MWM).

Material: 1 ♂, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 5.XI.2008, 750 m.

Distribution: North-eastern India, southern China, Myanmar, Thailand, southern Vietnam (ssp. *inexpectata* ZOLOTUHIN & WITT); Sumatra, Borneo, Peninsular Malaysia (ssp. *insulindiana* LAJ.).

**Arguda rectilinea* HAMPSON, 1892 [1893]

Fauna Brit. India, Moths 1: 414. Type locality: [Myanmar] Burma, Baulin. Holotype ♂ (BMNH).

Material: 2 ♂♂, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 5.XI.2008, 750 m; 2 ♂♂, Saysomboune prov., Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, 25.-29.X.2008, 750 m.

Distribution: North-eastern India, Myanmar, Thailand, Peninsular Malaysia, Sumatra, Borneo, Palawan.

**Arguda thaica* ZOLOTUHIN, 2005

Moths of Thailand 4: 125, figs 18A, 19G; pl. 18: 10, 12. Type locality: Thailand, Chiang Mai Prov., Doi Inthanon National Park, km 37-38 road (N of) Chom Thong, summit just above checkpoint 2, 1730 m, lower montane forest. Holotype ♂ (MWM).

Material: 1 ♀, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 5.XI.2008, 750 m.

Distribution: North-eastern India (Meghalaya), Thailand, Laos and Vietnam.

**Odonestis bheroba* MOORE, 1858-1859

Cat. lep. Ins. Mus. Hist. East-India House 2: 424, pl. 12a: 5. Type locality: [India] Darjeeling. Holotype ♀ (BMNH).

Material: 1 ♀, Saysomboune Prov., Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, 25.-29.X.2008, 750 m.

Distribution: Northern India, Nepal, southern and central China, Myanmar, northern Thailand, northern Vietnam (ssp. *bheroba* MOORE); eastern China (Fujiang, Jiangxi) and Taiwan (ssp. *formosae* WILEMAN).

**Takanea diehli* DE LAJONQUIÈRE, 1978

Atalanta 9: 234, figs 1, 2. Type locality: northern Sumatra, Stabat. Holotype ♂ (ZSM).

Material: 1 ♂, Saysomboune Prov., Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, 25.-29.X.2008, 750 m.

Distribution: Thailand and Laos, Peninsular Malaysia, Sumatra, Borneo, the Philippines.

**Kosala reducta* ZOLOTUHIN & WITT, 2000

Entomofauna Suppl. 11: 102, fig. 28, pl. 14: 82. Type locality: Northern Vietnam, Mt. Fan-si-pan, W-Seite, Cha-pa (=Sapa), 1600-1800m. Holotype ♂ (MWM).

Material: 1 ♂, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 5.XI.2008, 750 m.

Distribution: Northern Thailand, Laos, Northern Vietnam.

**Hallicarnia albipectus* (WALKER, 1855)

Gastropacha albipectus WALKER, 1855, List Spec. lep. Insects Colln Br. Mus. 6: 1395. Type locality: Not stated [unknown]. Type ♂ (BMNH).

Material: 1 ♂, Xiangkhouang, Ban Na Sao, 19°39'N, 102°58'E, 5.XI.2008, 750 m; 3 ♂♂, Saysomboune prov., Phou Khao Khouay Nat. Park, 18°54'N, 103°08'E, 25.-29.X.2008, 750 m; 1 ♂, Saysomboune Prov., Thongkhoun, 18°58'N, 102°00'E, 21.X.2008, 700 m.

Distribution: From north-eastern Himalaya through Thailand, Vietnam and Peninsular Malaysia to Sumatra and Borneo.

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